

Still Video Camera

MVC-C1

Operating Instructions

Before operating the unit, please read this manual thoroughly and retain it for future reference.

Contents

Precautions**2****Outline****3****Summary of Operation****4****Location and Function of Parts****5****Power Source****6****Inserting the Mavipak****8****Shooting****10****To Record onto a Recorded Track****12****Specifications****14****Troubleshooting****15**

IMPORTANT SAFETY INSTRUCTIONS

When using your electronic flash, basic safety precautions should always be followed, including the following:

1. Read and understand all instructions before using.
2. Close supervision is necessary when any appliance is used by or near children. Do not leave appliance unattended while in use.
3. Care must be taken as burns can occur from touching hot parts.
4. Do not operate appliance if it has been dropped or damaged—until it has been examined by a qualified serviceman.
5. Position the cord so that it will not be tripped over, pulled, or contact hot parts.
6. Always unplug appliance from electrical outlet when not in use. Never yank cord to pull plug from outlet. Grasp plug and pull to disconnect.
7. Loop cord loosely around appliance when storing.
8. To reduce the risk of electric shock, do not immerse this appliance in water or other liquids.
9. To reduce the risk of electric shock, do not disassemble this appliance, but take it to a qualified serviceman when service or repair work is required. *Incorrect reassembly can cause electric shock when the appliance is used subsequently.*
10. The use of an accessory attachment not recommended by the manufacturer may cause a risk of fire, electric shock, or injury to persons.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Precautions

- The Mavica MVC-C1 is a still video camera based on the **Hi8** format. To play back the Mavipak recorded with the MVC-C1, a playback adaptor, MAP-T1, or a still video player with the **Hi8** mark is necessary. When an unit without the **Hi8** mark is used, proper playback is not possible.
- Avoid using in a strong electric field. Pictures may be distorted or otherwise spoiled when used near the antenna of a TV or radio station.
- If the lens gets dirty, wipe off the lens with a dry, soft cloth. When it is left dirty, it can result in poor pictures. When it is extremely dirty, use a mild soap on the cloth before wiping.
- Do not leave the unit in a location near heat sources, or in a place subject to direct sunlight, excessive dust, or mechanical shock.
- When the casing becomes soiled, clean it with a soft cloth dampened with mild detergent solution. Never use abrasive cleaners or chemical solvents, as they may harm the casing.

If you have any question or problem concerning your unit that is not covered in this manual, please consult the nearest Sony dealer.

Be sure to bring the camera and the playback adaptor to the Sony dealer when requesting repair.

Owner's Record

The model and serial numbers are located on the bottom of the unit.

Record these numbers in the space provided below. Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. MVC-C1 Serial No. _____

Outline

The MVC-C1 "Mavica" is a still video camera that records pictures magnetically without the use of film. It is compact and light in weight. It is easy to operate and focus and exposure adjustments are not necessary. There is no need to develop or print a picture.

By using the playback adaptor (optional), the pictures can be viewed on your TV set. As in the use of videotape, re-recording is possible by erasing the recorded pictures. There are many ways this Mavica can be enjoyed that are not possible with an ordinary camera.

DURING TRAVEL

Pictures taken can be seen easily on the TV set.

LESSONS

Reviewing lessons in various pursuits on the TV set is possible.

SPORTS

By using continuous shooting, you can check your form while playing such sports as golf or tennis.

MEMOS

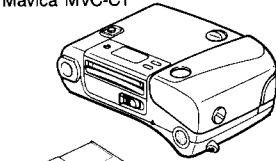
Since no developing and printing are necessary, and re-recording is possible, the Mavica can be used as a "note-taker" while window shopping or for other events or observations.

Summary of Operation

The following items are necessary for shooting.

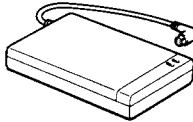
To use this unit, a playback adaptor MAP-T1 (optional) is necessary.

Mavica MVC-C1

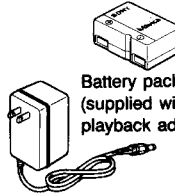


Mavipak (supplied)

Playback adaptor MAP-T1 (optional)



AC power adaptor AC-T1
(supplied with the
playback adaptor)



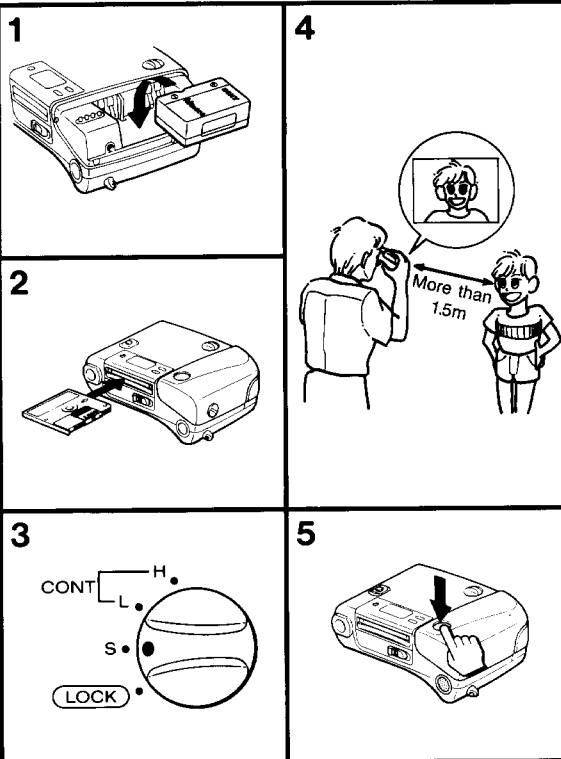
Battery pack BP-C1
(supplied with the
playback adaptor)

Be sure to charge the battery pack before using the unit.

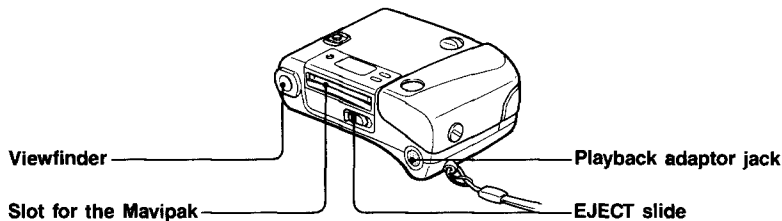
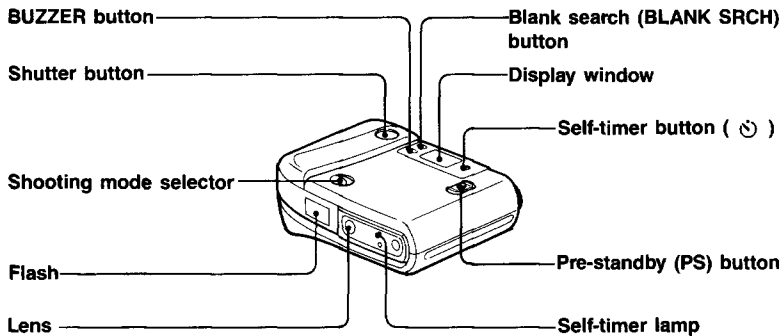
Shooting

For details,
refer to Page 4.

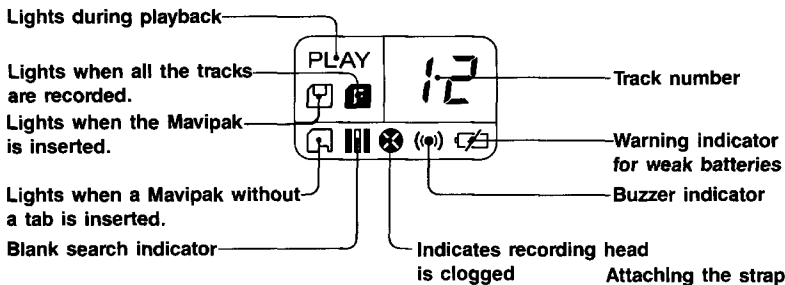
- 1 Install a fully-charged battery pack.
- 2 Insert the Mavipak
- 3 Set the shooting mode selector to S.
- 4 Look into the viewfinder and compose the picture.
- 5 Press the shutter button halfway. When the green LED glows in the viewfinder, press the button all the way down to take a picture.



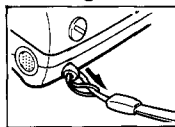
Location and Function of Parts



Display window



Attaching the strap

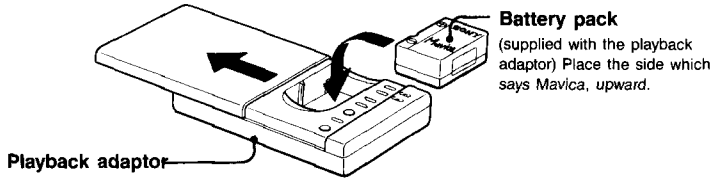


Accessories: Mavipak, Soft case, Strap

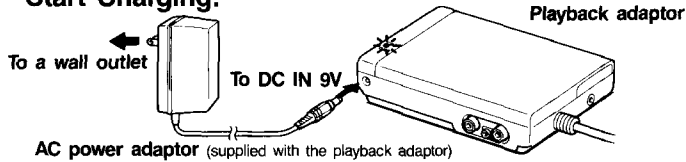
Power Source

Fully charge the battery pack.

1 Install the battery pack into the playback adaptor.

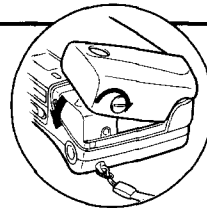
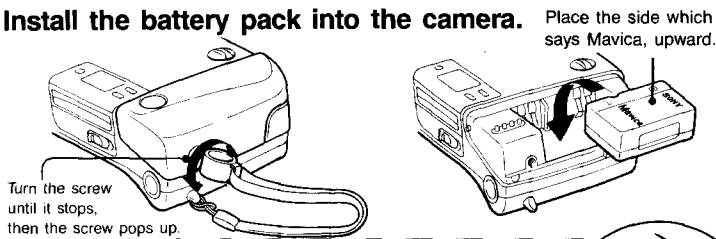


2 Start Charging.




When battery charge starts, the CHG-ADAPTOR lamp lights up, and goes off when completed. It takes about **three hours** to charge the battery.


3 Install the battery pack into the camera.




Number of pictures able to shoot with one charge of battery

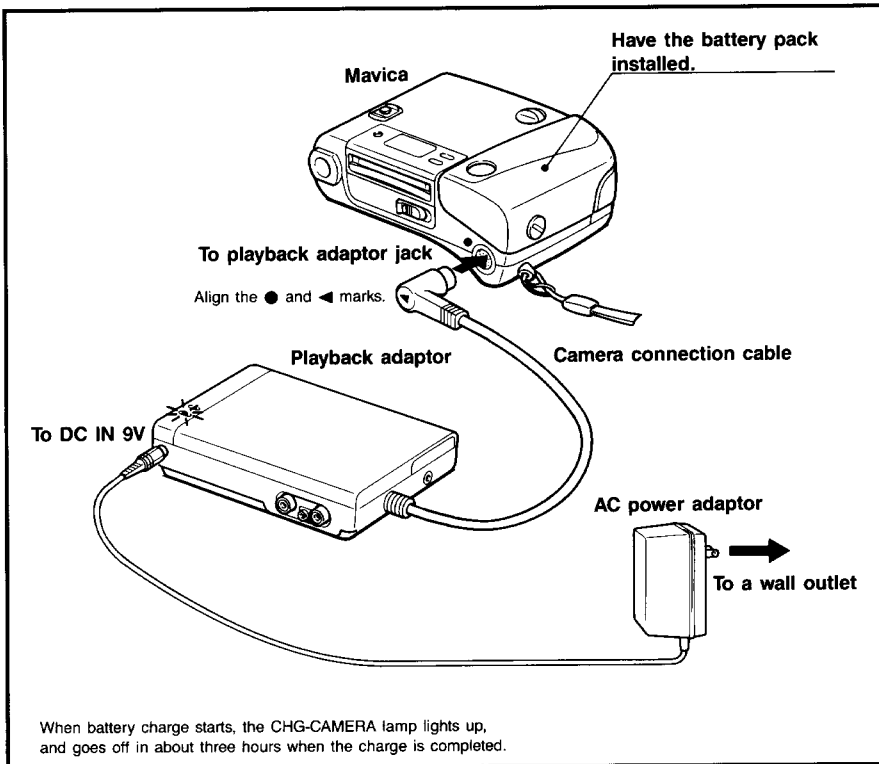
About 500 (10 Mavipaks) pictures can be taken when the battery is charged for three hours (at S-mode, without flash).

When the battery gets weak,  shows on the display window.

 (blinking) The battery pack is starting to lose power. Exchange or charge the battery pack as soon as possible.

 (lit) The Battery pack has consumed all of its power. No pictures can be taken. Exchange or charge the battery pack.

To Charge the Battery Pack in the Camera



When the battery pack is installed in both the camera and the playback adaptor

Continuous battery charge can be carried out—from camera to playback adaptor.

CAUTION

When the camera is not in use, remove the battery pack. If the battery is installed, even if the shooting mode selector is set to LOCK, a very small amount of electric current flows.

Life of the battery pack

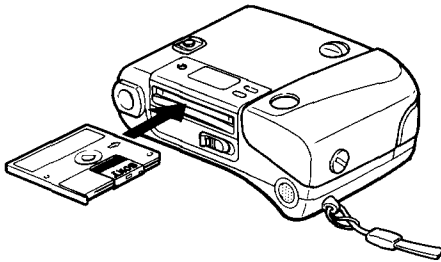
Change the battery pack to new one (BP-C1, optional) when it is only able to take about half the number of pictures, in average temperatures, even when it is fully charged.

Precautions on the battery pack

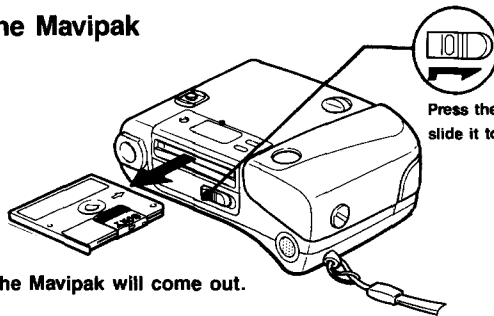
- When charging the battery pack, always use the playback adaptor MAP-T1.
- Do not short the terminals of the playback adaptor or the battery pack by screwdrivers, pins, etc.

Inserting the Mavipak

Insert until it stops—in the direction of the arrow.



To take out the Mavipak

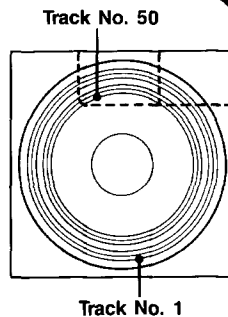


Press the blue lock button and slide it to the right.

The Mavipak will come out.

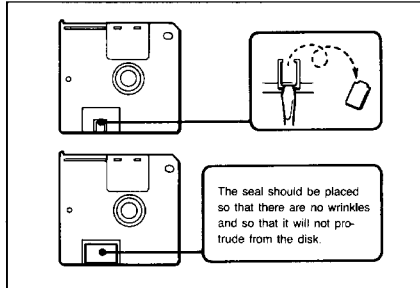
Mavipak

The Mavipak is a 2-inch video floppy disc. It conforms to the unified standard, designated by the Still video Camera Committee. It acts as would the film of a camera. A magnetic disc is in the Mavipak to record pictures. The frame where the picture is taken is called the track. The track is numbered from 1 to 50. A total of 50 pictures can be taken. Recording is done magnetically. Therefore, a recorded track can be erased, or recorded again. Use a Mavipak or a floppy disc with a **Vf** mark.



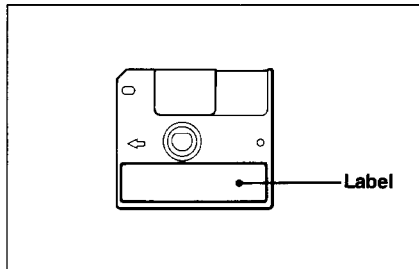
To Avoid Erasing a Record

- Take tab off the back of the Mavipak in order to avoid erasing a recorded picture.
- When the hole from which the tab was taken is covered by a seal supplied with the Mavipak, it can be recorded again.



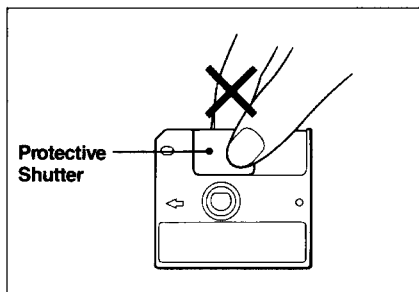
To Make a Memorandum of What Was Taken

- Place the label at the position indicated on the picture at right. When the label is not placed at the position shown, it can cause malfunction and damage.



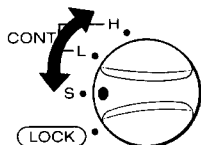
Precautions

- Never open the protective shutter.
- Do not place the Mavipak where there is magnetism (on top of a speaker box, etc.). This can cause the recorded picture to be erased, or to be of poor quality.
- Do not leave the Mavipak in the camera for a long period of time when not in use.
- Do not leave the Mavipak where there is direct sunlight, near heaters, or in a dusty place.
- When changing the Mavipak, avoid doing it in rain or snow, or in dusty places. When water or dust gets inside the camera, it causes damage.



Shooting

1 Select the shooting mode.



To shoot single picture

S.....General use. (A single picture is shot for each time the shutter button is pressed.)

Continuous shooting

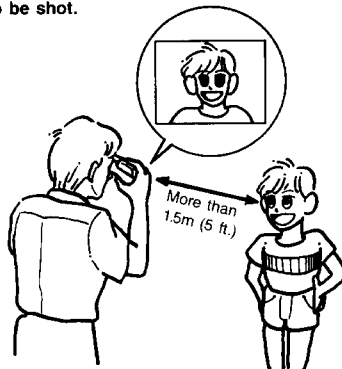
CONT L (continuous low).....4 pictures per second are shot while the shutter button is pressed. Useful in active sports.

CONT H (continuous high)9 pictures per second are shot while the shutter button is pressed. Useful for studying the swing in tennis, golf, etc.—by stopping the picture.

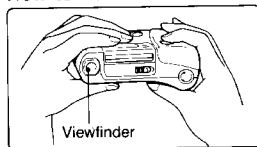
When using flash in the CONT L, and H modes, continuous shooting of one picture per approximately 2 seconds is possible.
(When using a fully-charged battery pack.)

2 Look into the viewfinder to compose the picture.

Stand more than 1.5m (5 ft.) from the subject to be shot.



How to hold the camera



When a red lamp blinks in the viewfinder, and a buzzer is heard—a picture cannot be taken. Look at the display window to find the cause.

Indication	Cause and countermeasure
--	The Mavipak is not inserted. Insert the Mavipak.
	The tab on the Mavipak has been removed. Exchange for a new Mavipak or put the supplied seal on.
	All tracks on the Mavipak have been recorded. Exchange for a new Mavipak or erase the tracks. (Refer to the operating instructions of MAP-T1).
	The last track (No. 50) has been recorded but erased track(s) remain. Refer to Page 10 for recording on the erased track(s).
	The battery pack is weak. Change for a new battery pack for charge the battery.
	Recording head is clogged in the camera. Contact the nearest Sony dealer. The picture just shot may not be recorded.

Install the fully-charged battery pack and the Mavipak into the camera before shooting.

3 Shooting

- 1 Lightly press the shutter button.
(Or the PS button*).

Shutter button



- 2 When the green lamp is lit in the viewfinder.



- 3 Press the shutter button all the way down.



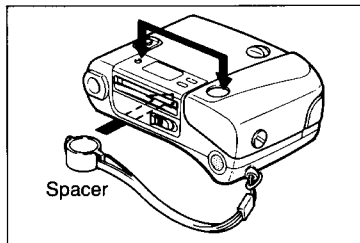
A buzzer will sound when shooting.

The flash activates automatically in a dark place.

For continuous shooting, press the shutter button all the way down from the beginning. Shooting will be continued while the shutter button is pressed.

Self-timer Shooting

Use self-timer shooting when taking a get-together picture, etc.



- 1 Place the camera on a flat surface. By putting the spacer (on the strap) under the camera, the camera becomes stable.
- 2 While pressing the self-timer button (☺), press the shutter button until the self-timer lamp blinks. The camera takes the picture about 10 seconds after the shutter button is pressed. A buzzer will sound for 10 seconds before shooting, and the self-timer lamp will blink. (The blinking becomes rapid for the last 2 seconds).

When no shooting is done for 5 minutes

To prevent battery consumption, the indication on the display window goes off, and the power will go off automatically. To start shooting again, press the shutter button lightly.

Buzzer

The buzzer sounds in the following cases:

- When shooting (beeps once)
- When shooting is not possible (beeps continuously)
- Self-timer shooting (sounds for 10 seconds)

To turn the buzzer off, press the BUZZER button.

(☼) on the display window will go off.

To turn the buzzer on, press the button again, and (☼) on the display window will appear.

The (☼) indicator will appear and the buzzer will go on when the shooting mode selector is once set to LOCK position or after changing the battery pack.

*PS button

When the PS button is pressed, it is the same as pressing the shutter button lightly, which starts metering and charges the flash. By using this button, the camera is in stand-by position. Therefore, it will respond to the shutter. However, when the PS button is pressed it consumes the battery quickly.

Flash

The flash light reaches up to about 4m (12 ft.). Shoot so that the object is within 1.5m (5 ft.) to 4m (12 ft.).

To release the self-timer

Set the shooting mode selector to the LOCK position.

When not using the camera

Set the shooting mode selector to the LOCK position. The power turns off and the shutter button is locked.

To Record onto a Recorded Track

Since Mavica records pictures magnetically, it can erase unnecessary track(s) and can record a different picture(s).

Erase Unnecessary Track(s)

The playback adaptor MAP-T1 is needed for erasing. For details, refer to the instruction manual of the playback adaptor.

To Record Onto Erased Track(s)

On which all the tracks are erased from Mavipak.

You can record from track No.1, the same as if it was a new Mavipak.

A Mavipak on which track(s) in-between are erased

1. Take the Mavipak out of the camera.
2. Press the BLANK SRCH button. ■■■ will appear on the display window.
3. Insert Mavipak and shoot.

Look for the unrecorded (erased) tracks, and start shooting from the track with the smallest number.

Precaution

The blank search function cannot be set while the Mavipak is in the camera.

To release the blank search function

Press the BLANK SRCH button again. ■■■ will disappear from the display window. The blank search function will also be released when the Mavipak is taken out, or when the battery pack is exchanged.

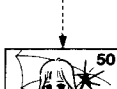
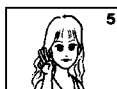
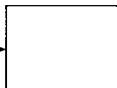
Comparison of the Regular Condition and When the Blank Search Function Is Used

Ex: In case of a Mavipak on which shooting from No. 1 to No. 5 was done, and tracks No. 2 and No. 4 were erased.

Regular Condition

A total of 45 pictures can be taken from No. 6 to No. 50. The newly taken pictures will not be mixed into the erased tracks.

Regular

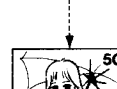
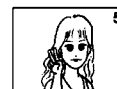


Cannot record on No. 2 and No. 4.

Using the Blank Search Function

A total of 47 pictures can be taken: For No. 2, No. 4 and from No. 6 to No. 50. Continuous shooting for 2 to 4 to 6 to 50 can be used.

Blank Search Function



Specifications

Type:	Still video camera with high-band format
Recording format:	Unified standard based on Still Video Camera Committee
Recording capacity:	50 pictures (field recording)
Lens:	15mm f/2.8; fixed focus (1.5m/5 ft. - infinity)
Image sensor:	2/3-inch MOS-image sensor (280,000 pixels); sensitivity: equivalent to ISO 80 film
Exposure control:	Programmed autoexposure; control range: EV 9-17; flash fires automatically below EV 9
Shutter:	Electronic shutter built in the image sensor; shutter speed range: 1/60-1/500 sec.
Metering system:	Center-weighted direct metering by the image sensor
Flash:	Automatic activation; guide number: 11
Shooting mode:	S - Single picture shooting CONT L - Continuous shooting at 4 pictures per sec. CONT H - Continuous shooting at 9 pictures per sec.
Self-timer:	Electronic type; 10-second delay
Operating temperature:	41°F-104°F (5°C-40°C)
Power source:	6V Ni-Cd battery pack
Dimensions:	144 × 56 × 106 mm (5 3/4 × 2 1/4 × 4 1/4 in.) (w/h/d)
Weight:	540g (1 lb. 4 oz.) without a battery
Supplied accessories:	Mavipak Soft case Strap

Design and specifications subject to change without notice.

Troubleshooting

Before going through the check list below, first refer back to the connections and operating procedures. Should any problem persist after you have made these checks, consult your nearest Sony service facility. The number in black is the page number to refer to.

Symptom		Cause	Remedy
Will not shoot when shutter button is pressed.	No indication in the viewfinder.	The battery is not installed. The battery is consumed.	Put in a fully-charged battery pack. See page 16.
	A red lamp lights up in the viewfinder and the buzzer is heard.	The shooting mode selector is set at the LOCK position.	Set to S or CONT L, H. See page 10.
The camera does not operate and indicates "00" on the display window.		Internal circuit is troubled by static electricity, etc.	Take the battery pack out, and re-install it to reset the camera.
The Mavipak ejects when inserted into the camera.		The Mavipak is not loaded properly.	Insert the Mavipak again. If it ejects again, exchange the Mavipak for another one.
Takes time for the green lamp to light up in the viewfinder.		The battery pack has been consumed.	Put in a fully-charged battery pack. See page 16.
The playback picture is blurred.		The object is too close.	Be more than 1.5m (5ft.) away from the object.
		Hands are shaking.	Hold the camera still and shoot.
The playback picture is reddish or greenish.		When the picture is not taken with flash, it becomes reddish under an incandescent light, and greenish under a fluorescent light.	
Many reddish circles appear on the playback picture.		Flare occurs on the lens caused by strong light, as from the sun.	Shoot the picture so that strong light will not go into the lens. Example: The reflection of water caused by the sunlight.
Thick black lines appear when shooting an object with a strong contrast. Or, the picture has a zigzag border.		This is not because it is out of order. This occurs because of the characteristic of the image sensor.	
The picture played back is dark even when the flash is used.		The object is too far.	Shoot the picture so that the object is within 1.5m (5ft.) to 4m (12ft.)
The eyes of the person are reproduced reddish when the flash is used.		This is not because of a fault. This occurs when the flash light goes into a person's eyes and lights the blood vessels of the retina.	This can be lessened by having the person get used to the light, or to have the person look somewhere other than directly into the camera lens.
The indications on the display window go off and the power is turned off.	At the time of shooting.	Left the camera for more than 5 minutes without operation.	Lightly press the shutter button. See page 10.
	At the time of playback.	Left the camera for more than 5 minutes.	Press the shutter button or the PLAY of the playback adaptor.
Consumption of the battery pack is rapid.		Incomplete battery charge.	Install a fully-charged battery pack.
		The battery pack is becoming old.	Exchange for a new battery pack.
		It is used in a place with an extremely low temperature.	The power of the battery pack decreases in a place with an extremely low temperature. Use it after warming the camera. This can be done by putting it into your pocket.